

United States v. Campbell: A Major Change for Urinalysis Prosecutions?¹

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Introduction

*United States v. Campbell*² is perhaps the most significant case dealing with urinalysis prosecutions in many years and has generated a tremendous number of questions and a fair amount of controversy. The Government Appellate Division (GAD) took the unusual step of petitioning the United States Court of Appeals for the Armed Forces (CAAF) to reconsider its opinion and on 22 March 2000, the CAAF issued a per curiam opinion on reconsideration.³ Unfortunately, the reconsideration opinion did not resolve many underlying questions, and in fact may have added to the confusion. For practitioners, the fundamental underlying question is: has *Campbell* drastically changed the requirements for drawing the permissive inference of wrongfulness in urinalysis prosecutions?

The Facts

Private First Class (PFC) Christopher Campbell was tried and convicted in May 1995 for wrongful use of lysergic acid diethylamide (LSD), in violation of Article 112a, Uniform Code of Military Justice (UCMJ).⁴ Campbell's sentence

included a bad-conduct discharge, seventy-five days confinement, forfeiture of \$549.00 pay per month for two months, and reduction to the lowest enlisted grade.⁵

It was not the facts in the case involving use of LSD that created the specified appellate issues. Instead, the determinative issue was whether the military judge had erred in admitting the urinalysis test results and the government's expert testimony regarding the LSD testing methodology used to analyze Campbell's urine sample.⁶ At the court-martial, the defense counsel moved to suppress the test results on the ground that the procedure used to confirm the presence of LSD was not considered reliable as required by Military Rule of Evidence (MRE) 702.⁷ The defense contended that the procedure used to confirm the LSD presence, the gas chromatography tandem mass spectrometry (GC/MS/MS) test, was not reliable as defined by MRE 702.⁸

The defense relied on two experts to support its claim. One, a retired state forensic toxicologist, stated that GC/MS/MS was not accepted in the scientific community as a method for testing LSD.⁹ According to this expert, adequate peer review of the testing methodology had not been accomplished. Another defense expert testified that the extremely minute amount of

1. Major Hudson would like to thank Captain Jeremy Ball for assisting him in the research and preparation of this article.

2. 50 M.J. 154 (1999) (*Campbell I*).

3. *United States v. Campbell*, 52 M.J. 386 (2000) (opinion on reconsideration) (*Campbell II*).

4. *Campbell I*, 50 M.J. at 155.

5. *Id.*

6. *Id.*

7. *Id.* at 156.

8. *Id.* The urine sample was initially sent to Fort Meade, Maryland for a radioimmunoassay (RIA) screening test. A sample is tested twice using the RIA method. However, that method is insufficient itself to confirm a sample as positive for drug use and is not certified as reliable under Department of Defense (DOD) guidelines. The sample was then sent to Northwest Toxicology Laboratory (NTL) for additional testing using the GC/MS/MS method. When this sample was tested, the so-called "gold standard" for urine testing was gas chromatography mass (not tandem) spectrometry. The NTL GC/MS/MS result showed a reading of 307 picograms of LSD per milliliter of urine. A picogram is a trillionth of a gram, much smaller than the nanogram detection levels for most urinalysis testing. The DOD cutoff for LSD is 200 picograms per milliliter of urine.

9. *Id.* at 157.

LSD in one's urine—given the average intake of LSD—made the urine difficult to scientifically analyze.¹⁰ He also pointed out that the GC/MS/MS procedure is “a rather unique system” that “combine[s] two mass spectrometers together to give us some additional data that can hopefully be used for drug identification.”¹¹ The expert further pointed out that the only lab that conducted the testing was Northwest Toxicology Laboratory (NTL) and that as a consequence, the methodology had not been accepted in the scientific community at large. As the expert testified, “This is a very novel technique, a novel piece of equipment and a very novel methodology.”¹² The expert also testified, however, that the reliability of NTL's results from GC/MS/MS testing could be verified by open control tests in other laboratories using different testing methodologies.¹³ A prosecution expert was also called to the stand, noting that there were over 300 GC/MS/MS instruments in use throughout the world, though NTL was the only one using GC/MS/MS for LSD confirmation.¹⁴

The CAAF's Decision

Given the novel testing procedure and the incredibly minute amounts of LSD found in the urine, it appeared the case would be decided on a straightforward application of expert witness principles based on *Daubert v. Merrill Dow Pharmaceutical*.¹⁵ In fact, the Army Court of Criminal Appeals had decided the case on that basis.¹⁶ Moreover, the original issue granted review by the CAAF also indicated the case would be decided using

Daubert standards.¹⁷ However, following oral argument at the CAAF in December 1997, the court specified three additional issues for review, focusing on the scientific basis for the Department of Defense (DOD) cutoff level of 200 picograms, and it based its decision to reverse on those specified issues.¹⁸

According to Judge Effron, the CAAF had to determine whether the prosecution had failed to provide “sufficient evidence on the record about the test that, under our case law, would permit a reasonable fact finder to conclude beyond a reasonable doubt that appellant used LSD and that the use was wrongful.”¹⁹ Judge Effron held that the prosecution had so failed.

In analyzing the issue, Judge Effron wrote that “cases which have permitted the inference of wrongfulness strictly require that the prosecution also establish the reliability of the methodology and explain the significance of the results of the test of the accused's sample.”²⁰ While this was not controversial, Judge Effron then went on to state that the prosecution's expert testimony *must* show: (1) that the metabolite is “not naturally produced in the body” or any substance other than the drug in question, (2) that the cutoff level and reported concentration are high enough to *reasonably discount the possibility of unknowing ingestion and to indicate a reasonable likelihood that the user at some time would have “experienced the physical and psychological effects of the drug,”* and (3) that the testing methodology reliably detected the presence and reliably quantified the concentration of the drug or metabolite in the sample.²¹

10. *Id.*

11. *Id.*

12. *Id.* at 158.

13. *Id.*

14. *Id.*

15. 509 U.S. 579 (1993). *Daubert* lists four non-exclusive factors to determine whether expert scientific evidence should come in: (1) can the theory be tested or has it been tested, (2) has it been subject to peer review, evaluation, or publication, (3) what is the potential error rate of the theory, (4) and an application of general acceptance in the scientific community. *Id.* In a follow up case to *Daubert*, *Kumho Tire v. Carmichael*, the Supreme Court has allowed a judge considerable leeway in applying *Daubert* standards to a variety of scientific and nonscientific evidence. *Kumho Tire v. Carmichael*, 526 U.S. 137 (1999). For a discussion of *Daubert* and *Kumho Tire* standards of admissibility in military courts, see Major Victor M. Hansen, *Rule of Evidence 702, The Supreme Court Provides a Framework for Reliability Determinations*, 162 MIL. L. REV. 1 (1999). It is interesting to note that if the CAAF had relied on a *Daubert* analysis in reversing the case, *Campbell* would probably not be very significant or problematic today. The Army does not use NTL anymore for LSD testing. Rather, all LSD testing is ultimately completed at Tripler Army Medical Center, and the methodology used is the GC/MS test, the “gold standard” test considered the most reliable for urinalysis testing. In fact, both the urinalysis laboratories at Tripler Army Medical Center and Fort Meade are developing a new testing procedure for LSD called liquid chromatography/mass spectroscopy (LC/MS) which, if DOD certified and accepted by scientific communities, may soon be used to test for LSD in urine samples. Telephone Interview with Dr. Cathy Okano, Tripler Army Medical Center Forensic Toxicology Drug Testing Laboratory (Sept. 21, 1999).

16. *United States v. Campbell*, No. 9400527 (Army Ct. Crim. App. Apr. 1, 1996) (unpublished).

17. *United States v. Campbell*, 46 M.J. 449 (1997).

18. *Campbell I*, 50 M.J. at 155. The CAAF heard additional oral argument on the specified issues in June 1998.

19. *Id.* at 160-61.

20. *Id.* at 160.

21. *Id.* (emphasis added).

Referring to these three requirements of proof as “well-established case law,”²² the CAAF held that the prosecution in PFC Campbell’s case failed to prove the levels or frequency given in testing, which in turn could indicate

(1) that the particular GC/MS/MS test reliably detected the presence of LSD metabolites in urine; (2) that GC/MS/MS reliably quantified the concentration of those metabolites; and (3) that the DOD cutoff level of 200 pg/ml was greater than the margin of error and sufficiently high to reasonably exclude the possibility of a false positive and establish the wrongfulness of any use.²³

Judge Effron added: “In particular, the Government introduced no evidence to show that it had taken into account what is necessary to eliminate the reasonable possibility of unknowing ingestion or a false positive.”²⁴ As such, according to Judge Effron, the evidence left open the question of whether the cutoff level and the level of LSD in Campbell’s urine “would *reasonably exclude the possibility of a false positive and would indicate a reasonable likelihood that at some point a person would have experienced the physical and psychological effects of the drug.*”²⁵ Indeed, according to Judge Effron, this was the type of evidence previously “required to ensure that any use was wrongful.”²⁶

This language appeared problematic and even novel; since *United States v. Mance*,²⁷ military practitioners believed that introducing evidence to eliminate the possibility of unknowing ingestion or false positives was not necessary. Instead, the positive result was sufficient to allow, but not require, a factfinder to infer that the accused wrongfully used drugs.²⁸ Yet, this reasonable inference based on the result alone was exactly what

Judge Effron said could not be drawn in this case: “[W]e conclude that there was no rational basis upon which the factfinders could draw a permissible inference of wrongfulness of use from the concentration of LSD reported in the appellant’s urine sample.”²⁹ The GC/MS/MS testing could neither reasonably exclude the possibility of a false positive, nor could it indicate a reasonable likelihood that at some point a person would experience the physical and psychological effects of the drug.³⁰

A Rationale for *Campbell*

As *Campbell* turns on a permissive inference, a brief examination of this inference is necessary. A permissive inference “allows—but does not require—the trier of fact to infer the elemental fact from proof by the prosecutor of the basic one and which places no burden of any kind on the defendant.”³¹ Because the fact finder is free to accept or reject the inference, and no burden of proof is shifted, it affects the “beyond a reasonable doubt” standard only if, under the facts of the case, “there is no rational way the trier could make the connection permitted by the inference.”³² It is thus considered far less problematic than a mandatory presumption in a criminal case. The only requirement for the inference is a “rational link” between the proven basic fact and the elemental one.³³

The Supreme Court has distinguished a mandatory from a permissive presumption or inference by describing a mandatory presumption as “logically divorced from [the facts of the case] and based on the presumption’s accuracy in the run of cases.”³⁴ This is why the Supreme Court has determined that an independent evaluation of facts is irrelevant when analyzing a mandatory presumption, but not a permissive one, unless “there is ample evidence in the record other than the presumption to support a conviction.”³⁵

22. *Id.*

23. *Id.* at 161.

24. *Id.*

25. *Id.* (emphasis added).

26. *Id.*

27. 26 M.J. 244 (C.M.A. 1988).

28. *Id.*

29. *Campbell I*, 50 M.J. at 161.

30. *Id.*

31. *Ulster County Court v. Allen*, 442 U.S. 140, 157 (1979).

32. *Id.*

33. *Id.*

34. *Id.* at 159.

Therefore, the counter argument to the standard pre-*Campbell* urinalysis permissive inference is that it was precisely the *lack* of other evidence in the so-called “paper case” that made the drawing the permissive inference problematic. For if the element of wrongfulness or knowledge can *only* be adduced from the presence of the metabolite or the drug in the urine, then it may appear the permissive inference was given undue weight without something further, such as an additional requirement that an expert reasonably discount innocent ingestion and indicate physical or psychological effects.

A second rationale for the *Campbell* opinion may be the broad encompassing nature of the military’s urinalysis program. Unquestionably, the military urinalysis program is the most sweeping in the United States. The Supreme Court has upheld the constitutionality of federal drug testing programs in *Skinner v. Railway Labor Executives’ Association*³⁶ and *National Treasury Employees v. von Raab*.³⁷ However, neither testing program is as comprehensive as the military’s, and generally do not involve criminal prosecutions. For example, the testing program for customs employees in *von Raab* shielded the employees from monitors when urinating, and positive results could not be turned over to criminal prosecutors without the employee’s written consent.³⁸ *Campbell* thus may be a way to make urinalysis prosecutions much more difficult, and more like civilian testing programs, and thereby cause the government to use administrative methods, rather than criminal prosecutions.

A Departure from Precedent?

Whether the CAAF intended *Campbell* to make the military’s urinalysis programs more closely resemble civilian programs or not, the apparent requirement of an expert who reasonably discounts the possibility of unknowing ingestion and indicates a reasonable likelihood that the user at some time would have “experienced the physical and psychological effects of the drug,”³⁹ has created significant confusion. There is no precedent for this requirement in prior military case law,

despite Judge Effron’s characterization of it as part of the “well established case law” dealing with urinalysis. Indeed, as previously mentioned, numerous prior cases include facts that appear specifically to reject such a requirement.⁴⁰

Furthermore, *Campbell* relies on *United States v. Harper*⁴¹ for support for its requirement of a reasonable likelihood that a person would at sometime have experienced the physical and psychological effects of the drug. *Harper* does discuss evidence presented by the prosecution that discounted the possibility of innocent ingestion as well as indicating that the user felt the effects of the drug.⁴² However, this evidence apparently was presented to persuade the court to draw the permissive inference, and not as an underlying requirement:

As indicated earlier in this opinion, the prosecution introduced sufficient evidence from which a factfinder could find beyond a reasonable doubt that appellant used marijuana. *On this basis, the prosecution could also ask the factfinder to infer that the use was wrongful . . . To persuade the court to draw this inference, however, expert testimony was again offered by the prosecution. Doctor Jain testified that the nanogram readings on the three samples ruled out the possibility of passive inhalation. Moreover, he testified that these particular results indicated that the user at one time felt the physical and psychological effects of the drug.*⁴³

In other words, Dr. Jain’s testimony was not required for the court to draw the inference of wrongfulness, but it was persuasive.

Furthermore, some experts today contend that Dr. Jain’s expert testimony is considered scientifically dubious. Specifically, his testimony that the results indicated that the user at one time felt the physical and psychological effects of the drug, even if thought credible in the mid 1980s, at the time of *Harper*,

35. *Id.* at 160.

36. 489 U.S. 602 (1989). In *Skinner*, the Federal Railroad Administration mandated urinalysis testing for employees involved in accidents and who had violated certain safety rules. *Id.*

37. 489 U.S. 656 (1989). In *von Raab*, the United States Custom Service required Customs Service employees applying for jobs involving illegal drugs or use of firearms to provide urine samples. *Id.*

38. *Id.*

39. *Id.*

40. *See, e.g.*, *United States v. Bond*, 46 M.J. 86 (1997); *United States v. Pabon*, 42 M.J. 404 (1995).

41. 22 M.J. 157 (C.M.A. 1986).

42. *Id.* at 163.

43. *Id.* (emphasis added).

is no longer viewed as such in the toxicology field today.⁴⁴ As one currently practicing toxicologist states: “We know some toxicologists would not have supported that opinion, and for sure, now we know that it is not the case.”⁴⁵ The CAAF has thus taken a scientific “standard” that was arguable at best in 1986, and not credible at all today, and apparently turned it into a virtual threshold of admissibility.

Campbell’s holding on the permissive inference thus appears to be based upon dubious scientific testimony and, in any event, is a significant departure from precedent. In *United States v. Ford*,⁴⁶ for example, the Court of Military Appeals held that a finding of wrongfulness beyond a reasonable doubt could be upheld even when the defense submits evidence that undermines or contradicts the permissive inference. Yet, the court did not require any evidence to indicate that the accused felt physical or psychological effects of the drug.⁴⁷

A subsequent case, *United States v. Mance*, also indicated that the permissive inference could be drawn even “where contrary evidence is admitted,” if the prosecution could convince the fact finder to disbelieve that contrary evidence.⁴⁸ At least implicitly, *Mance* thus reiterated that a failure to discount the reasonable possibility of innocent ingestion would not prevent fact finders from drawing the permissive inference of wrongfulness solely based on the urinalysis result and expert testimony explaining the test.⁴⁹ The court in *Mance* simply stated that the inference could be drawn under “appropriate circumstances” and that the knowledge element of both possession and use of illegal drugs could be inferred by the fact finder from the presence of the controlled substance.⁵⁰

What are those “appropriate circumstances” as described in subsequent cases? “Appropriate circumstances” do *not* appear to be those in which an expert has to discount a reasonable possibility of innocent ingestion or indicate that the user at sometime felt the effects of the drug. Indeed, the CAAF asserted the opposite in *United States v. Pabon*, when it rejected the defense’s challenge to the permissive inference of knowledge.⁵¹ In *Pabon*, the government expert testified that the accused’s level of 1793 nanograms of cocaine metabolite per milliliter of urine was “consistent with unknowing ingestion.”⁵² In fact, the prosecution’s expert testified that the level of cocaine metabolite in Pabon’s urine was a “small enough dose” that it was possible to be given “without [the user’s] knowledge and with no sufficient physiological or psychological symptoms to be aware that there was some sort of pharmacologically active drug that had been administered.”⁵³

Similarly, in *United States v. Bond*,⁵⁴ the accused denied using cocaine and proffered an innocent ingestion defense. The government’s chemist admitted “that someone who ingested a small amount of cocaine . . . dissolved in an alcoholic beverage might not know they had ingested cocaine.”⁵⁵ Despite this testimony, the CAAF found the evidence legally sufficient. As the CAAF had previously held in *Harper*, urinalysis test results and expert testimony explaining the procedure and results were sufficient to permit a fact finder to find beyond a reasonable doubt that an accused used drugs and for a permissive inference of wrongfulness to be drawn.⁵⁶ “The existence of evidence raising an innocent ingestion defense . . . did not compel introduction of additional prosecution evidence rebutting it or cause the prosecution’s evidence . . . to become legally insufficient.”⁵⁷

44. Electronic Correspondence between Dr. Donald Kippenberger, Director of Forensics Operations, Research Dynamics Incorporated, and Major Walter M. Hudson (Apr. 8, 2000) (on file with author) [hereinafter Kippenberger Correspondence]. Dr. Kippenberger, a forensic toxicologist, currently inspects Department of Defense drug testing laboratories, and from 1990-1994 was consultant to the Surgeon General of the Army, helping set policy for Department of Army drug testing laboratories. Lieutenant Colonel Ronald Shippee, Commander of the Fort Meade Drug Testing Laboratory has also stated that, “Based on a “spot urine” specimen result only, no expert can testify with any degree of accuracy: (1) how the subject was exposed to the drug, (2) when the subject was exposed, and (3) the degree of impairment at the time of exposure.” Electronic Correspondence between Lieutenant Colonel Ronald Shippee and Major Walter M. Hudson (Apr. 12, 2000) (on file with author).

45. Kippenberger Correspondence, *supra* note 44.

46. *United States v. Ford*, 23 M.J. 331, 332 (C.M.A. 1987).

47. *Id.*

48. *United States v. Mance*, 26 M.J. 244, 253 (C.M.A. 1988) (quoting *Ford*, 23 M.J. at 335).

49. *Id.* at 253.

50. *Id.*

51. *United States v. Pabon*, 42 M.J. 404, 405 (1995).

52. *Id.*

53. *Id.* (emphasis added).

54. 46 M.J. 86, 88 (1997).

55. *Id.* at 89.

56. *Id.* (citing *United States v. Harper*, 22 M.J. 157, 161-62 (C.M.A. 1986)).

If, as *Campbell* seems to indicate, it is now required that, to draw the permissive inference of wrongfulness, an expert must testify that the possibility of innocent ingestion can be reasonably discounted or that it is reasonably likely that the user felt the physical or psychological effects of the drug, it is virtually certain that in many cases the prosecution's proof will fail. As one expert has pointed out, "[e]xcept for cases involving very high concentrations of the drug or metabolite in urine, an expert could not state with absolute confidence that the donor felt the effects of most drugs."⁵⁸ Furthermore, in many, if not most, cases involving urinalysis tests, innocent ingestions are also possible with the current cutoff levels—the cutoff levels were established for the purpose of negating "the possibility of false positives."⁵⁹

Therefore, defense counsel have been making motions for findings of not guilty pursuant to Rule for Courts-Martial (R.C.M.) 917 in cases where the only evidence of drug use is a positive urinalysis test.⁶⁰ In a so-called "paper case" in which the government only has the positive urinalysis result and expert opinion about it, such an inference is necessary for the knowledge element of the offense. If the fact finder cannot draw the inference, the prosecution fails on that element of proof.

Can *Campbell* Be Limited to its Facts?

The most obvious government response to *Campbell* is to restrict it to its facts—specifically, the type of LSD testing done on Campbell's urine or to LSD as opposed to other drugs. One can argue that the CAAF has "repeatedly accepted the use of GC/MS [gas chromatography/mass spectroscopy, the so-called "gold standard" for urinalysis testing] with regards to testing for and prosecuting drugs other than LSD, such as marijuana and cocaine" and, thus, rely on years of the CAAF's past case law allowing the permissive inference to be drawn in such cases.⁶¹

The problem with this attempt to limit *Campbell* to LSD cases or to the testing methodology used in the case is that the opinion is apparently not limited in that manner. The cases relied upon in *Campbell* as support for the requirement of expert testimony that reasonably discounts innocent ingestion, and that the user felt the effects of the drug, do not involve LSD.⁶² The opinion more logically leads to the opposite conclusion: this testimony is required in *all* "urinalysis alone" cases. Indeed, that *Campbell* would apparently not be limited to its facts was the cause of Judge Sullivan's concern in his dissent in the case: "[T]he majority's new approach to drug prosecutions goes far beyond the rules for proving drug cases now provided by the President in the Manual for Courts-Martial, United States."⁶³

Campbell Reconsidered⁶⁴

57. *Bond*, 46 M.J. at 90 (citing *United States v. Matias*, 25 M.J. 356, 361 (C.M.A. 1987)).

58. Affidavit of Aaron J. Jacobs at 5, Petition for Reconsideration of *United States v. Campbell*, 50 M.J. 154 (1999). Dr. Jacobs states elsewhere in the affidavit:

Each individual reacts differently to drug ingestion due to numerous factors, to include prior usage, weight, and overall health condition. For example, a heavier person may have to ingest much more of a drug to feel the same physiological affects as well as achieve the same level of drug in a urine sample as another, smaller person.

Id. at 7. The CAAF declined to admit Dr. Jacobs's affidavit and, therefore, will not consider it in its decision on whether to grant the government's petition for reconsideration.

59. *Id.*

The cutoff concentrations were intentionally selected at concentrations that would not detect all drug users. Rather, the levels chosen would allow for the detection of a sufficient number of drug users to serve as a deterrent to those who abuse drugs in the population tested. The presence of a drug and/or drug metabolite at a concentration at or above the cutoff level in urine confirms the donor ingested the drug. The mode of ingestion of the drug is unknown (oral, insufflation [snorting], or intravenous).

Id. Additionally, Dr. Donald Kippenberger served as the consultant to the Army Surgeon General when cutoff changes to nanogram levels were made for certain drugs such as cocaine (moving cocaine confirmation from 150 ng/ml to 100 ng/ml). According to him, "We looked solely at the technical capabilities of our instrumentation and whether we knew that the population of the negatives did not overlap with the population of the positives." Kippenberger Correspondence, *supra* note 44.

60. MANUAL FOR COURTS-MARTIAL, UNITED STATES, R.C.M. 917 (1998) [hereinafter MCM]. Since *Campbell*, two motions for findings of not guilty had been granted in Army courts-martial, and at least one in Navy and Air Force courts-martial. In *United States v. Green*, one of the only two Court of Criminal Appeals decisions dealing with urinalysis prosecutions since *Campbell*, the Navy-Marine Corps Court of Criminal Appeals essentially ruled contrary to *Campbell*, simply listing it as authority contrary to a long line of cases beginning with *United States v. Harper*. *United States v. Green*, No. 9900162 (N.M. Ct. Crim. App. Feb. 10, 2000) (unpublished).

61. Government Response to Defense Motion for Finding of Not Guilty at 9, *United States v. Tanner* (on file with authors).

62. *United States v. Campbell*, 50 M.J. 154, 160 (1999) (*Campbell I*) (citing *United States v. Murphy*, 23 M.J. 310, 312 (C.M.A. 1987); *United States v. Harper*, 22 M.J. 157, 161 (C.M.A. 1986)).

Because *Campbell* was such a controversial decision, and apparently a major departure from precedent, the GAD petitioned the CAAF to reconsider its opinion. On 22 March 2000, the CAAF issued a per curiam opinion on the reconsideration, with a dissent from Judge Sullivan.⁶⁵ However, the reconsideration opinion raised a series of questions itself.

The CAAF first disposed of Campbell's contention that the reconsideration opinion would only be advisory and that the Government's reconsideration petition should be rejected because of an alleged conflict of interest.⁶⁶ The CAAF then stated the purpose for its opinion: "In the present case, which addresses the frequently litigated subject of drug testing, clarification upon reconsideration may provide a useful means of reducing potential for unnecessary litigation in the future."⁶⁷ Unfortunately, the reconsideration opinion did not clarify the original opinion. Rather, because it is subject to several interpretations, may only have confused matters more. Practitioners at both the trial and appellate level may have to wait for further clarification from the CAAF before the dust settles on this issue.

The CAAF reiterated the three-part standard it set forth in the original opinion used to demonstrate the "relationship between the test result and the permissive inference of knowing, wrongful use . . ."⁶⁸ This was the controversial three-part standard, with the second part that stated "that the cutoff level and reported concentration are high enough to reasonably discount the possibility of unknowing ingestion and to indicate a reasonable likelihood that the user at some time would have

'experienced the physical and psychological effects of the drug.'"⁶⁹ Interestingly, the CAAF stated that the prosecution "may [as opposed to must] demonstrate the relationship between the test result and the permissive inference of knowing, wrongful use" by using the three part standard.⁷⁰ In the original opinion, the CAAF stated that the type of evidence used to establish the test "was required in *Harper*," indicating evidence that met the standard was mandatory.⁷¹

The CAAF then identified the perceived deficiency in *Campbell*. According to the CAAF, the deficiency was the "absence of evidence establishing the frequency of error and margin of error" which caused the CAAF to hold that the prosecution did not reasonably exclude the possibility of an unknowing ingestion and thus the inference could not be drawn.⁷² The CAAF further stated that the "three part standard" was not the only "evidence" the government could use to allow a rational basis for the inference to be drawn, as long as it met Daubert standards of reliability and relevance.⁷³

Yet the above arguably does little to clarify the CAAF's earlier holding. As an indication of the confused nature of the opinion, it equates the three-part standard with "evidence" used to satisfy such a standard.⁷⁴ Additionally, it states that the three-part standard is not necessary in order to draw the rational basis, but provides no indication as to what other standard should be used.⁷⁵ Instead it states that *Daubert* evidentiary standards, as further elaborated upon by the *Kumho Tire* analysis, are factors that may be used to establish the "reliability and relevance" of scientific evidence.

63. *Id.* at 162.

64. The status of the government's petition for reconsideration generated controversy as well. In late March 2000, the Air Force Court of Criminal Appeals released *United States v. Adams*, Misc. Dkt. 99-13 (A.F. Ct. Crim. App. Mar. 20, 2000). In that brief opinion, Senior Judge Young, writing for the court, dismissed an Article 62, UCMJ appeal the government had submitted seeking to overturn a military judge's finding of not guilty pursuant to R.C.M. 917 in a urinalysis case. The military judge had relied on *Campbell* in dismissing the case, stating that the prosecution was required to prove that the accused felt the physical and psychological effects of methamphetamine. While the Air Force Court dismissed the government's appeal, it did state:

[T]he *Campbell* decision does not represent a final, binding decision of the Court. Decisions of the CAAF are inchoate until Court issues a mandate. See *United States v. Miller*, 47 M.J. 352, 361 (1997). The CAAF has not issued a mandate in this case because it still has a motion for reconsideration . . . Therefore, *Campbell* was not binding on the military judge.

Id. Presumably, following the reconsideration, the Air Force Court of Criminal Appeals accepts *Campbell* as binding precedent.

65. *United States v. Campbell*, 52 M.J. 386 (2000) (opinion on reconsideration) (*Campbell II*).

66. *Id.* at 387-388.

67. *Id.* at 388.

68. *Id.*

69. *Id.*

70. *Id.*

71. *United States v. Campbell*, 50 M.J. 154, 161 (1999) (*Campbell I*).

72. *Campbell II*, 52 M.J. at 388.

73. *Id.* See *supra* note 15 for a discussion of *Daubert* and *Kumho Tire* evidentiary standards.

Does this mean that standard “scientifically accepted” testing procedures, such as the use of the gas chromatography/mass spectroscopy (GC/MS), do not require use of the three-part standard? If so, there is a logical flaw in the CAAF’s reasoning, for while the GC/MS test may be an accepted testing procedure, the procedure itself indicates nothing about how or why the drug or drug metabolite got into the sample provider’s urine.⁷⁶ An expert testifying about the testing methodology by itself provides no connection between the methodology and the permissive inference.

In other words, if the CAAF is stating that establishing the viability of the testing is enough for the inference, it is “mixing apples with oranges”—it is confusing a standard to establish a methodology with a standard upon which to draw an inference of knowing use. It seems then, until a methodology is established that can allow an expert to state that the testing procedure itself allows one to connect the test with knowing ingestion—if such a methodology is even possible, there is arguably no way around the three-part standard.

The counter argument to this interpretation of the opinion on reconsideration is that the CAAF’s language was carefully drafted to back down from its original opinion that seemed to require the three-part test as a prerequisite of proof in urinalysis cases. This reading of the opinion has some credence because Chief Judge Crawford, one of the two dissenters in *Campbell I*, joined in the per curiam opinion. While the CAAF may have left open the question of exactly what other expert testimony or evidence would satisfy the concerns in *Campbell I*, at least the door has been left open for other methods to be successful. Subsequent case law and trial practice will have to answer any questions stemming from these methods as they arise.

As for the test established in *Campbell I* itself, the reconsideration also states that, in using the three-part standard, the prosecution does not need to “introduce scientific evidence tailored to the specific characteristics of the person whose test results are at issue.”⁷⁷ Rather, it is sufficient for an expert to testify “with respect to human beings as a class” to draw the inference, and if the defense states that the inference should not be applied to a person with the accused’s characteristics, that goes toward the weight of inference a factfinder may place on it, and not to its permissibility.⁷⁸

In other words, an expert does not seem to need to refer to a person with the accused’s characteristics—height, weight, and other characteristics—to reasonably discount the possibility of unknowing ingestion and to indicate a reasonable likelihood that the accused at some time would have experienced the physical and psychological effects of the drug. Rather, an expert can presumably posit that “an average person” or “a typical person” with a particular nanogram level would probably not have innocently ingested and would probably have felt the drug’s effects. At first glance, this appears to aid the government in getting past the three-part standard. Yet this may not be as helpful as it seems.

The reason is that even when positing an “average person” or a “typical person” or simply “human beings as a class,” very little can be said about feeling physical and psychological effects at virtually any known level. Perhaps at nanogram concentrations considerably above the cutoff levels, an expert could testify that a person might feel such effects, but this is highly speculative and subjective.⁷⁹ Certainly, for nanogram levels at or near the cutoff levels, such expert testimony is not currently scientifically available.⁸⁰

74. The opinion stated:

If the Government relies upon test results, it is not precluded from using evidence other than the three-part standard if such evidence can explain, with equivalent persuasiveness, the underlying scientific methodology and the significance of the test results, so as to provide a rational basis for inferring knowing, wrongful use.

Campbell II, 52 M.J. at 388-389 (emphasis added).

75. *Id.*

76. See discussion *supra* note 44.

77. *Campbell II*, 52 M.J. at 389.

78. *Id.*

79. For example, “when pressed” one expert stated that she could perhaps state that a first time user would feel the effect of cocaine at 100 ng/ml, though she admits this is “highly subjective.” Telephone Interview with Dr. Cathy Okano, Tripler Army Medical Center Forensic Toxicology Drug Testing Laboratory (Apr. 7, 2000) [hereinafter Okano Interview]. A study published in 1987 in the *Journal of Analytical Toxicology* states that a 25 mg oral dose given to a single volunteer resulted in a peak urinary concentration of 269 ng/ml at one hour and 7,940 ng/ml at twelve hours, remaining at 300 ng/ml at forty-eight hours. According to the study, one hour after the drug ingestion, the volunteer “noted a slight dryness of the mouth, lightheadedness, and mild headache, which persisted for approximately 1.5 h.” R.C. Baselt & R. Chang, *Urinary Excretion of Cocaine and Benzoylcegonine Following Oral Ingestion in a Single Subject*, 11 *JOURNAL OF ANALYTICAL TOXICOLOGY* 81 (1987). Another expert has stated that, short of a documented study to support such an opinion, “the expert is just guessing” and that there is little, if any, scientific evidence on which to base such an opinion on. Kippenberger Correspondence, *supra* note 44.

80. Okano Interview, *supra* note 79; Kippenberger Correspondence, *supra* note 44.

Furthermore, discounting innocent ingestion, even given an “average human being,” again is not possible at nanogram levels at or near the cutoffs, and indeed would have to be tied to a particular set of facts. If the nanogram level were at a certain level, again, considerably above the cutoff, and a hypothetical was posited (which would have to be based upon the accused’s explanation of his innocent ingestion), then an expert could perhaps render an opinion that would discount the possibility of innocent ingestion. However, if the nanogram level were not sufficiently high enough, the expert could not discount such a possibility.

It appears then that the CAAF’s opinion on reconsideration still may require the three-part standard as a threshold for the permissive inference. An alternative reading of the opinion is that it does not require the three part standard, but it is not clear what, in the absence of that standard, is acceptable. It also appears that while an expert can testify as to “human beings as a class” and not a particular accused, only in cases involving high nanogram levels will an expert be able to testify that the cutoff level and reported concentration are high enough to reasonably discount the possibility of unknowing ingestion and to indicate a reasonable likelihood that the user at some time would have experienced the physical and psychological effects of the drug. Thus, the reconsideration may really have added little or nothing to the original opinion. This may explain Judge Sullivan’s dissent, in which he states: “The majority does not meaningfully depart from this position today [that the user at some time would have experienced the physical and psychological effects of the drug], so I again dissent.”⁸¹

The Consequences of *Campbell*

Campbell could result in significant shift in the trying of so-called “paper” urinalysis cases, at least when the reported level of drug in the urine is at or near the cutoff level. Administrative actions, such as bars to reenlistment, adverse counseling, and possibly administrative separations, rather than trial by court-

martial could potentially become the alternative means of disposition for this class of drug offenses.⁸² Furthermore, it seems logical that Article 15, UCMJ, punishments would also decrease. A soldier could turn down the Article 15 and demand trial by court-martial, knowing the prosecution’s potential problems of proof. This, in turn, could potentially decrease the number of urinalysis tests conducted, because the test’s significance as a drug deterrent will diminish. Indeed, one can postulate a “worst case scenario” for the government: if the consequences of a positive urinalysis result are purely administrative, this might create an incentive for soldiers who want to be discharged to take drugs and be subsequently administratively separated.

Conclusion

Regardless of whether *Campbell I* and the reconsideration improperly rely on scientific testimony and a misapplication of precedent, or deliberately restrict the use of urinalysis testing in courts-martial, it is having an impact in the military community. Defense counsel are wisely making motions pursuant to R.C.M. 917,⁸³ and trial counsel are wisely attempting to distinguish *Campbell* from other cases. Following the reconsideration, because of its rather confusing language, the debate should only intensify, with the government arguing that *Campbell* allows other methods, which can “with equivalent persuasiveness” provide a rational basis for inferring knowing and wrongful use, and the defense stating that current testing procedures in themselves can provide no rational connection. Or perhaps both sides will engage in a “battle of the experts” with the government expert testifying that, at (a presumably extremely high) nanogram level, the user likely felt the physical and psychological effects of the drug and that innocent ingestion can be discounted, and the defense expert drawing the opposite conclusion. Whatever the outcome in particular cases, one unfortunate result of *Campbell* is both uncertainty and confusion.

81. *Campbell II*, 52 M.J. at 389 (Sullivan, J., dissenting).

82. It has been reported anecdotally to the authors that some cases have been disposed of under *Army Regulation 635-200*, Chapter 10, Discharge in lieu of trial by court-martial, as a result of *Campbell*. U.S. DEP’T OF ARMY, REG. 635-200, PERSONNEL SEPARATIONS: ENLISTED PERSONNEL, ch. 10 (17 Oct. 1990).

83. See *supra* note 60 (discussing successful R.C.M. 917 motions made by defense counsel citing *Campbell*).